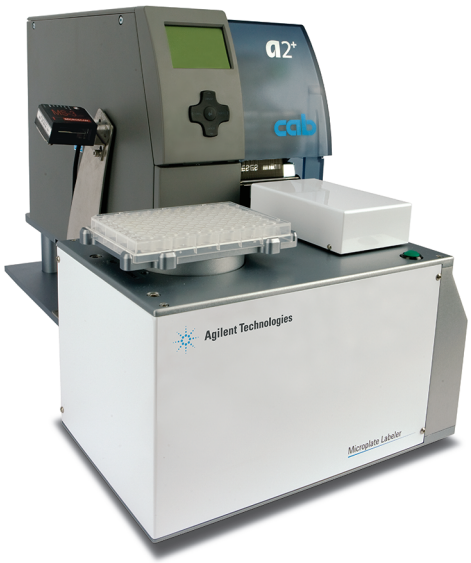
Agilent Microplate Labeler

Data Sheet



Applications

1. Print 1D (linear) barcodes, 2D barcodes and human readable content on adhesive labels
2. Apply adhesive labels with printed content on microplates
3. Verify 1D (linear) barcodes and 2D barcodes when used with a barcode reader
4. Create data clones and log microplate activities when used with a barcode reader

Introduction

When introduced in 2000, the original Agilent Microplate Labeler G5404A quickly became a widely-used platform for on-demand, barcode print-and-apply applications in the life sciences. The ***Agilent Microplate Labeler G5404B/G*** retains the easy-to-integrate form factor, speed and proven label applicator, and combines it with the next generation in thermal label printers, featuring a design optimized for

- Small labels
- Repeatable label presentation position
- Automated label applicators
- Extended MTBA (Mean Time Between Assists)

How is this repeatability and reliability achieved?

- Improved registration — ideal imaging and picking positions
- Custom small label peeling mechanism
- Tensioned peeling system — ensures label backing stays taut
- Buckling-resistant die-cast aluminum chassis
- Agilent's certified, designed-for-automation, clear-backed, adhesive labels

Additional product enhancements include

- Provides 600 dpi high resolution, crisp images and more flexibility in sizing codes
- Reduced particulate generation — via cleaner label backing
- Bright, easy-view transparent printer cover
- 100-240 volt auto switching power supply

Walkaway Time = | **Printer Reliability** | **+ Applicator Reliability** | **+ Consumables Reliability**

Laboratory automation is our business. We're listening and understand the goal: speed-to-opportunity. Agilent helps your lab get there with fast, dependable products and services of high value.

Agilent Technologies

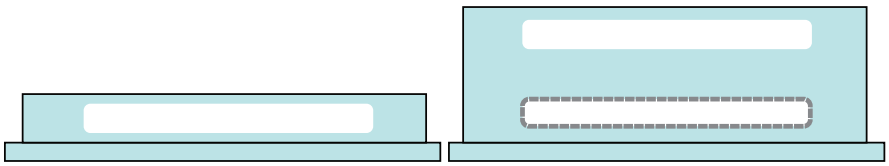
Modes of Operation

Standalone: The Microplate Labeler can be operated in a standalone (manual) mode in which the user loads and unloads microplates from the microplate stage. This mode requires the use of a host PC running the powerful labeling application, PlateTag, which is included with the instrument. Although used in a manual mode, the Microplate Labeler coupled with the PlateTag software allows the user to leverage these benefits of automation:

- Print and apply up to four labels per plate on any size batch of plates
- Use databases, files, or counters to define unique data to be automatically printed on each successive label
- Use constants to put the same data on multiple labels without needing to type that data multiple times
- Use the optional barcode reader to clone data from existing labels onto new labels
- Use the optional barcode reader to verify data on each label after application to the plate

Automated in Agilent Workstations/Systems: When automated in an Agilent System or Workstation, the Microplate Labeler is controlled by the flagship software application, VWorks. Providing the widest range of instrument and applications support, VWorks allows complete automation of the labeling function when used with a compatible microplate handler such as Agilent's BenchCel. In addition to automating the plate handling for the labeling process, VWorks offers a broad variety of data integration options, supports the use of multiple Microplate Labelers, and provides innovative error-handling.

Integrated into a 3rd Party Automation System: ActiveX control software is provided with each Microplate Labeler allowing the instrument to be incorporated into an integrator's own host automation software. The instrument features an RJ45 Ethernet port to enable communication with the host PC.



End-user has a choice of two convenient automated placement positions. Left microplate features centered label placement, right microplate could have label in the same relative position (label with dotted line), centered relative to this microplate's height or placed higher towards the top of the microplate.

Barcodes, data sources

With the optional integrated barcode scanner option, you can instantly create data clones or log microplate activity.

Bundled software can access a variety of data sources, including comma- or tab-delimited files and spreadsheets, and can be integrated with an ODBC-compliant LIMS.

Labware Compatability

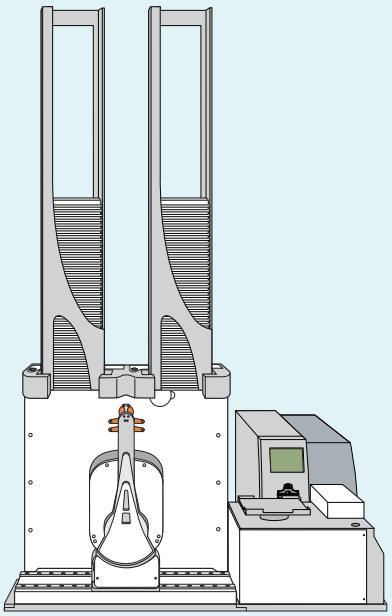
The Agilent Microplate Labeler accommodates a wide range of microplates that meet the ANSI Standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004. Compatible labware range includes many deep-well microplates, full-skirt PCR microplates and tube racks.[1] A two-position microplate stage allows for two vertical label application positions that automatically adjust for labware with special requirements such as tall microplate skirts or tall deep-well microplates.

Compact size and speed

The Microplate Labeler's compact size fits easily on a benchtop, while its speed allows users to achieve aggressive throughput goals. The 600-dpi thermal transfer printer allows the Microplate Labeler to print up to six fields (of machine or human readable content) per label.

High quality consumables

Labels and ribbons designed and tested for laboratory use, withstand exposure to wide temperature ranges (-80°C to 100°C) and various reagents including DMSO—important features in many biotech applications



Automated Labeling Print-and-Apply Solution

For high-throughput labeling needs, the Agilent Microplate Labeler can be integrated with the Agilent BenchCel Microplate Handler. The BenchCel allows up to 360 plates to be labeled at one time, at a rate of three microplates per minute, making quick work of even the tallest stack of microplates.

Features & Benefits

- **Flexible Label Formats:** The Microplate Labeler offers a wide range of fonts, linear barcodes, 2D matrix codes and magnifications for maximum flexibility; users can label up to four sides of most compatible labware using a variety of data input sources.
- **Easy to Integrate:** With a small footprint, an easy-to-access plate stage, and straightforward device drivers, the Microplate Labeler is an excellent choice for integration projects.
- **High Speed:** The Microplate Labeler can repeatedly print and apply labels at speeds of up to one label every 4 seconds.
- **Machine Code Verification:** With the optional barcode reader, the Microplate Labeler can verify and reapply barcode labels. The barcode reader can also be used to clone existing labels or for systematic microplate tracking.

Optional barcode reader/arm assembly.

Specifications

Cycle Time: Less than 4 seconds per label

Printer Resolution: 600 dpi

Label Application: ± 1.0 mm horizontally and ± 0.5 mm vertically

Symbologies: Code 128
Code 39 (full ASCII)
Interleaved 2 of 5
Codabar
Code 93
HIBC
Data Matrix (2D)
PDF 417 (2D)
Micro PDF 417 (2D)

Labware Compatibility Microplates: Microplates that meet the ANSI Standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004

Operating Requirements

Electrical: 100–240 VAC, 50–60 Hz, 2.75A

Air: 70 Lpm at 5.5 bar [2.5 cfm at 80 psi]

Software: Use Microplate Labeler Diagnostics for real-time, manual control (setup/troubleshooting). Employ PlateTag Software to process plates with the Microplate Labeler in a stand-alone mode. Use Agilent VWorks software when part of an Agilent lab automation system. Utilize ActiveX commands when using third-party software to control the Microplate Labeler.

Requires G5404B/G Microplate Labeler enhanced software (VWorks, BenchWorks, PlateTag, ActiveX) — contact Technical Support or your Agilent Technical Sales Professional for details on available upgrades for your software platform.

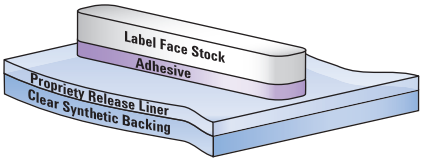
Controller: PC running compatible software per above

Interface: 10 BaseT Ethernet Port (Recommended), RS-232

Certification: CE certified

Label Media: Agilent Microplate Labeler certified, designed-for-automation, adhesive labels plus high performance, application-matched ribbon for biotech applications.

For complete media specifications, please download a PDF copy of the *Microplate Labeler Consumables Selection Guide* found in the Agilent Microplate Labeler product section at Agilent.com



*Agilent's second generation, **Microplate Labeler** automation-certified labels with application-matched ribbon guarantee the highest level of system performance and superior instrument and applications support*

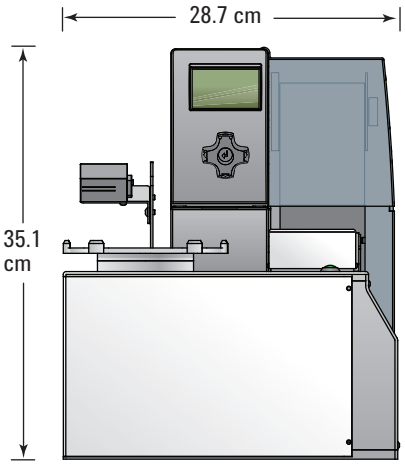
Label Dimensions: 50.8 mm W x 6.35 mm H [2 in x 0.25 in]*

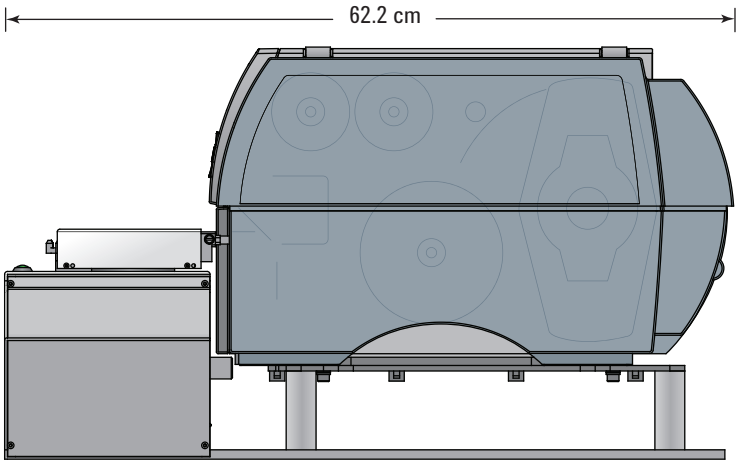
** The instrument design has been optimized for the use of this Agilent standard label size. For non-standard labels, contact the Agilent Automation Solutions Technical Support Team or an Agilent Technical Sales Professional for additional information or to discuss your requirements.*

Roll Length: 6,500 or 13,000 labels per roll. Labels are sold with enough ribbon to print the corresponding amount of labels in Agilent G5404B/G Microplate Labeler "Media Kits."

Temperature Range: –80°C to 100°C

Durability: DMSO and acetone resistant



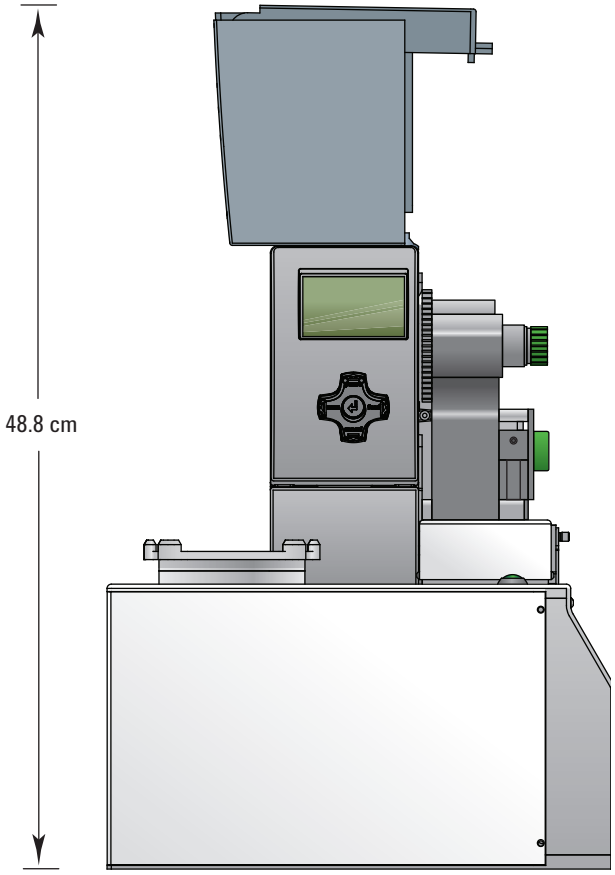


Dimensions:

Width: 28.7 cm [11.3 in]
Depth: 62.2 cm [24.5 in]
Height: 35.1 cm [13.8 in]
Weight: 21 kg [46.7 lbs]

View of Instrument with Open Hinged Cover for Consumables Replacement

(Users with height constraints may choose to operate instrument with snap-off see-through cover removed when instrument is placed within a safety enclosure free from aggressive chemicals or vapors)



Part No. (Instrument Order/Configuration)	Description	Part No. (Standalone purchase of component only)
G5404B/G	**Microplate Labeler.** High speed, microplate label printer/applicator, for robotic integration or stand-alone operation. Variety of symbologies, fonts, and magnifications. (Includes 1 ea. 6.5K Media Kit)	Not Applicable
G5404B/G Option 260	**Labeler Barcode Reader (1D)**. Verify or clone linear (1D) barcodes. Includes mounting arm and cable.	08332-101
G5404B/G Option 264	**Labeler Media Kit 0.25" 6.5K**. Ribbon & labels for 6,500 labels. DMSO resistant, -80°C to +100°C. 6.35 mm H x 50.8 mm W. 0.25" H x 2" W. Compatible w/06497-001, 0.25" Vac Pads. (Includes 6,500 labels and ribbon to print 6,500 labels)	G5404-60005
G5404B/G Option 267	**Labeler Media Kit 0.25" 13K.** Ribbon & labels for 13,000 labels. DMSO resistant, -80°C to +100°C. 6.35 mm H x 50.8 mm W. 0.25" H x 2" W. Compatible w/06397-001, 0.25" Vac Pads.	G5404-60013
Misc. Related Components		
	Labeler, Shipping Carton Kit. Original packaging kit to return instrument to factory. *(Intermec-printer based platform only.)*	G5404-68000
	Labeler, Shipping Carton Kit. Original packaging kit to return instrument to factory. *(CAB A2+ printer based platform only.)*	G5404-68001
G5474A	**Labeler Upgrade.** Parts & Labor to replace/upgrade printer. G5404A Intermec-based Labeler to G5404B CAB A2+-based. Includes CAB printer, risers, etc.	
	Labeler Vac Pad Kit .25". Vacuum pads for .25" (6.35mm) high labels. Maintenance spare, replace when stiff/cracked. Set of six. End-user replaceable. *(Suction cups used to pull label off backing.)*	06397-001

Microplate Labeler Data Sheet Notes:

1. Labware Compatibility. The use of this instrument platform requires the use of microplates that meet the ANSI Standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004. Since customer application requirements can vary, customers should make an effort to confirm the suitability of this product for their needs as Agilent does not warrant or make claims as to the suitability of an instrument for customer applications. Product Specialists and Application Scientists are available to assist the customer in determining if the instrument is a good match for the workflow under consideration.

2. 3rd Party Media: Labels and Ribbons. The performance of the Agilent Microplate Labeler has been optimized using Agilent media. If you choose to try third-party labels or ribbons and experience poor performance/ instrument problems and contact Agilent for support, it is your responsibility to immediately notify the Agilent support representative that you are using third-part media. Use of third-party labels and ribbons may be outside the scope of the terms of the Microplate Labeler instrument warranty and may result in the user paying for any necessary repairs and applications support, as a result of using these materials. If you are considering the use of third-party consumables because the Agilent consumables do not meet your requirements, please give Agilent the opportunity to try to help.

3. Reference. This information is for reference only and subject to change.

Instrument Warranty: One year. Details are available on the Agilent website.

www.agilent.com/lifesciences/automation

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc. 2014
Published in the USA
November 4, 2014
5990-4326EN

Agilent Technologies